

4.10.18 NEPA process  
Air / water

Role of state  
collaborative  
Supplement to EIS

Shell  
conversion  
Part of Contact  
Elliott Vega

## Louisiana Offshore Oil Port (LOOP)

### Background:

Deep Roadmap  
2) Classification of Needs  
Subject 1

Loop's Mts

- LOOP was organized in 1972 as a Delaware corporation and converted to a limited liability company in 1996. LOOP is a joint venture of Marathon Pipe Line LLC, Shell Oil Company, and Valero Terminalling and Distribution Company. It is not a government facility.

Elliott Vega  
Country  
Sea  
South  
Brazil

- Under the Deepwater Port Act (DPA) of 1974, the Department of Transportation (DOT) originally licensed LOOP as an offshore oil import facility on December 19, 1976. LOOP has both onshore / near shore and offshore facilities. Onshore / near shore facilities and discharges are regulated by Louisiana Department of Environmental Quality (LDEQ) under the Clean Water Act (CWA) and Clean Air Act (CAA). LOOP has operated as an import DPA terminal since 1981.

Dis. Re  
to find

- The Offshore Marine Terminal is part of the LOOP Deepwater Port Complex and is located roughly 18 nautical miles off the coast of Louisiana, in the Gulf of Mexico outside of the state territorial waters. The Offshore Marine Terminal consists of a pumping platform, control platform and three single-point mooring buoys used for the offloading / on-loading of crude tankers.

Call  
w/ Map

→ D

M  
Attr. Biggs  
memo

- The Maritime Administration (MARAD) for DOT and the US Coast Guard (USCG) assume lead agency responsibilities for consulting with other Federal and State agencies under the DPA. LOOP submitted a request to amend the Operations Manual contained in the existing deepwater port license to convert a portion of the existing crude oil importing operation to accommodate crude oil exporting operations, which were initiated on February 16, 2018. The USCG and MARAD are serving to integrate the project analysis and consultation required in accordance with the National Environmental Policy Act (NEPA) and the DPA. To date, LOOP has loaded crude to 2 Very Large Crude Carrier vessels.

Back to  
Services

Jurisdiction

In-house  
Air

- LDEQ and Region 6 have individually and now jointly issue the CWA NPDES permit for onshore, near shore (state waters) and offshore (Federal waters) discharges. The last NPDES permit expired over 4 years ago, but has been administratively extended for existing discharges while a new permit with additional discharge points can be proposed and finalized.

W A  
CC  
w/ state

LDEQ  
Invitation

- LDEQ has issued CAA permits for only the onshore emission points. There has never been a CAA permit (Title I or Title V) for emissions from the Offshore Marine Terminal. LOOP's position is that they are not subject to EPA jurisdiction under the CAA. This is not

Elliott Vega available Mon/Tuesday

the position of EPA, MARAD, Department of Interior nor USCG. The recently initiated export operations may subject LOOP to the Subpart Y Marine Terminal Loading MACT requirements.

- One of LOOP's outside counsels has recently asserted that LOOP is not subject to EPA jurisdiction under either the CAA or CWA.
- In responding to inquiries from MARAD and USCG about LOOP's permit status under its existing import configuration and proposed export configuration, it became apparent that the existing 40 year old Environmental Impact Statement (EIS) was inadequate to support issuance of the NPDES permit with additional discharges under NEPA nor were the consultations with the US Fish & Wildlife Service (FWS) and NOAA Fisheries for compliance with the Endangered Species Act (ESA), the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), and the Marine Mammal Protection Act (MMPA) in place for any EPA permitting decision.

#### EPA Actions:

- Region 6 has participated / hosted a series of conference calls with other Federal agencies (MARAD, USCG, FWS, NOAA Fisheries, DOI's Bureau of Ocean Energy Management, and DOI's Office of the Solicitor) on the concerns raised regarding LOOP's federal permit status. There is universal agreement among the Federal agencies that LOOP is a "new source" under the CAA and CWA based on language in the DPA and that LOOP's Offshore Marine Terminal is a deepwater port under the DPA and not an outer continental shelf source under the Outer Continental Shelf Lands Act and therefore excluded from EPA jurisdiction under CAA, Section 328 (b).
- Region 6 Water Division and ORC met with FWS and NOAA Fisheries to outline the consultation process and requirements to be followed to comply with ESA, MSFCMA, and MMPA. Water Division and ORC have examined options to supplement the old EIS to reflect the proposed NPDES discharges.
- Region 6 Multi-media Division and ORC have held several conference calls with LOOP's outside counsel representatives explaining our position that LOOP is subject to the Clean Air Act under EPA jurisdiction but the nature of the permitting scheme is dependent on operational factors that only the company can provide. A technical discussion with all parties (EPA, LDEQ, LOOP) was discussed but has not been agreed to by LOOP.

#### Talking Points / Next Steps:

- (b) (5)

- EPA has offered to hold a technical discussion with LOOP, EPA, and LDEQ to discuss the operations and how to address statutory and regulatory requirements.

- (b) (5)

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# State of Louisiana

## EXECUTIVE DEPARTMENT EXECUTIVE ORDER NUMBER 18-09

### *LOUISIANA OFFSHORE TERMINAL AUTHORITY TO ADMINISTER THE FEDERAL DEEPWATER PORT ACT FOR LOUISIANA*

WHEREAS, the federal Deepwater Port Act, 33 U.S.C. Sec. 1501, et seq., provides for the application for, and the construction and operation of deepwater ports or offshore terminal facilities beyond the seaward boundaries of Louisiana, for the transportation, storage or further handling of oil or natural gas;

WHEREAS, the state of Louisiana, to the extent that it is considered an adjacent coastal state, has been granted certain rights, duties, and responsibilities by the Deepwater Port Act in connection with the application for, and construction and operation of, such deepwater ports;

WHEREAS, there is a need for a single state agency to supervise, coordinate, and direct the state's duties and responsibilities in connection with implementation of the Deepwater Port Act;

WHEREAS, the Louisiana Offshore Terminal Authority was created by La. R.S. 34:3101, et seq., to promote, plan, finance, develop, construct, control, license, regulate, supervise, operate, manage, maintain and modify offshore terminal facilities within its jurisdiction;

WHEREAS, the Deepwater Port Act has extended the jurisdiction of the state of Louisiana to adjacent offshore waters beyond state boundaries for the limited and exclusive purposes as stated in the Act; and

WHEREAS, the Louisiana Offshore Terminal Authority has continuously demonstrated its competence and expertise in operation, monitoring, and regulation of the Louisiana Offshore Oil Platform ("LOOP").

NOW, THEREFORE, I, JOHN BEL EDWARDS, Governor of the state of Louisiana, by virtue of the power vested in me by the Constitution and statutes of the state of Louisiana do, effective immediately, hereby order and direct as follows:

SECTION 1: The Louisiana Offshore Terminal Authority is hereby designated as the single state agency which, subject to the powers and duties reserved to the Governor, shall administer and supervise the rights, duties and responsibilities of the state of Louisiana under the federal Deepwater Port Act.

SECTION 2: The right, duties and responsibilities to be supervised and administered by the Louisiana Offshore Terminal Authority shall include, but are not necessarily limited to, those contained in 33 U.S.C. Sec. 1504(h)(2) and 33 U.S.C. Sec. 1508, except for those powers expressly reserved to the Governor under 33 U.S.C. 1502(10) and Sec. 1508(b)(1) relative to the Governor's authority to approve, disapprove, or conditionally approve pending applications. All required notices from the U.S. Coast Guard or the secretary of the U.S. Department of Transportation under the Deepwater Port Act, shall continue to be sent directly to the Governor, whose office shall provide same to the Louisiana Offshore Terminal Authority.

SECTION 3: The rights, duties and responsibilities to be administered and supervised by the Louisiana Offshore Terminal Authority in connection with the Deepwater Port Act shall include, but shall not necessarily be limited to, the following:

- A. Upon receipt from the Governor of an application made under the Deepwater Port Act for the construction and operation of a deepwater port or offshore terminal facility, the Louisiana Offshore Terminal Authority shall coordinate and supervise the review by the state of such application, including coordination with other necessary state agencies, including the Department of Environmental Quality, the Department of Wildlife and Fisheries, and the Department of Natural Resources. The review shall include all environmental impact statements submitted, the impact on the coastal environment, the impact on the inshore and offshore waters and fisheries of the state, the impact on navigation, examination of monitoring plans, and such other reviews as the Louisiana Offshore Terminal Authority may deem necessary to assure the protection of the state and its resources.
- B. Formulation and implementation of any necessary environmental monitoring and security plans, in cooperation with the operator, federal agencies, and state agencies.
- C. Coordination with other adjacent coastal states and any other states impacted by the construction and operation of a deepwater port facility.
- D. Letting of necessary contracts in connection with environmental monitoring, security and such other necessary services as may be required by the Louisiana Offshore Terminal Authority in connection with the application for, or construction and operation of, deepwater ports under the Deepwater Port Act. Such contracts shall be let in accordance with law, and specifically in accordance with the requirements of the Louisiana Offshore Terminal Authority implementing legislation, La. R.S. 34:3101, et seq.
- E. Upon completing necessary reviews of an application for construction of a deepwater port facility, report its findings and recommendations to the Governor so as to allow the Governor adequate information upon which to exercise in a timely manner, the Governor's authority under 33 U.S.C. Sec. 1508(b)(1) to approve, disapprove, or conditionally approve a pending application.
- F. In accordance with the provisions of 33 U.S.C. Sec. 1504(h)(2), obtain compensation for any economic cost incurred by the state of Louisiana in fulfilling its duties and responsibilities in connection with the construction and operation of any deepwater port facility, by fixing and collecting reasonable fees for the use of a deepwater port facility and for use of land-based facilities directly related to a deepwater port facility, subject to the approval of the secretary of the U.S. Department of Transportation.

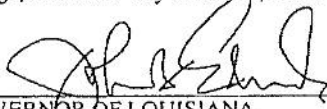
SECTION 4: For the Louisiana Offshore Terminal Authority to carry out its responsibilities as ordered herein, subject to the availability of funding, the Louisiana Offshore Terminal Authority shall have the authority to establish an office with appropriate staff and facilities; to develop and implement an operational plan; to develop and implement a communications plan; to work with industry with regard to homeland security, safety, and hurricane-preparedness plans; to construct and implement a budget, including performance-based budgeting; to institute monitoring and reporting timelines and guidelines in compliance with the Deepwater Port Act and other applicable law; and generally to do and implement any other necessary and appropriate measures to allow the Louisiana Offshore Terminal Authority to function effectively, in accordance with law, and specifically in accordance with the provisions of La. R.S. 34:3102, et seq.

SECTION 5: All departments, commissions, boards, offices, entities, agencies, and officers of the State of Louisiana, or any political subdivision thereof, are authorized and directed to cooperate with the Task Force in implementing the provisions of this Order.

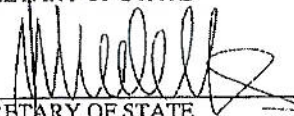
SECTION 6: This Order is effective upon signature and shall continue in effect until amended, modified, terminated or rescinded by the Governor, or terminated by operation of law.



IN WITNESS WHEREOF, I have set my hand officially and caused to be affixed the Great Seal of Louisiana, at the Capitol, in the City of Baton Rouge, on this 21<sup>st</sup> day of March, 2018.

  
GOVERNOR OF LOUISIANA

ATTEST BY THE  
SECRETARY OF STATE

  
SECRETARY OF STATE



the amount in controversy or the citizenship of the parties, to enforce any provision of this chapter or any condition of a license issued pursuant to this chapter, or to order the Secretary to perform such act or duty, as the case may be.

**(b) Notice; intervention of right by person**

No civil action may be commenced—

(1) under subsection (a)(1) of this section—

(A) prior to 60 days after the plaintiff has given notice of the violation (i) to the Secretary and (ii) to any alleged violator; or

(B) if the Secretary or the Attorney General has commenced and is diligently prosecuting a civil or criminal action with respect to such matters in a court of the United States, but in any such action any person may intervene as a matter of right; or

(2) under subsection (a)(2) of this section prior to 60 days after the plaintiff has given notice of such action to the Secretary.

Notice under this subsection shall be given in such a manner as the Secretary shall prescribe by regulation.

**(c) Intervention of right by Secretary or Attorney General**

In any action under this section, the Secretary or the Attorney General, if not a party, may intervene as a matter of right.

**(d) Costs of litigation; attorney and witness fees**

The Court, in issuing any final order in any action brought pursuant to subsection (a) of this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any party whenever the court determines that such an award is appropriate.

**(e) Statutory or common law rights unaffected**

Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement or to seek any other relief.

(Pub. L. 93-627, § 16, Jan. 3, 1975, 88 Stat. 2140.)

**§ 1516. Judicial review; persons aggrieved; jurisdiction of courts of appeal**

Any person suffering legal wrong, or who is adversely affected or aggrieved by the Secretary's decision to issue, transfer, modify, renew, suspend, or revoke a license may, not later than 60 days after any such decision is made, seek judicial review of such decision in the United States Court of Appeals for the circuit within which the nearest adjacent coastal State is located. A person shall be deemed to be aggrieved by the Secretary's decision within the meaning of this chapter if he—

(A) has participated in the administrative proceedings before the Secretary (or if he did not so participate, he can show that his failure to do so was caused by the Secretary's failure to provide the required notice); and

(B) is adversely affected by the Secretary's action.

(Pub. L. 93-627, § 17, Jan. 3, 1975, 88 Stat. 2141.)

**§ 1517. Repealed. Pub. L. 101-380, title II, § 2003(a)(2), Aug. 18, 1990, 104 Stat. 507**

Section, Pub. L. 93-627, § 18, Jan. 3, 1975, 88 Stat. 2141; Pub. L. 98-419, § 4(a), Sept. 25, 1984, 98 Stat. 1608, set penalties for discharge of oil into marine environment and provided for creation and maintenance of a Deepwater Port Liability Fund.

**DEEPWATER PORT LIABILITY FUND**

Amounts remaining in Deepwater Port Liability Fund established under former subsec. (f) of this section to be deposited in Oil Spill Liability Trust Fund established under section 9509 of Title 26, Internal Revenue Code, with that Fund to assume all liability incurred by the Deepwater Port Liability Fund, see section 2003(b) of Pub. L. 101-380, set out as a note under section 9509 of Title 26.

**EFFECTIVE DATE OF REPEAL**

Repeal applicable to incidents occurring after Aug. 18, 1990, see section 1020 of Pub. L. 101-380, set out as an Effective Date note under section 2701 of this title.

**§ 1517a. Omitted**

**CODIFICATION**

Section, Pub. L. 101-164, title I, Nov. 21, 1989, 103 Stat. 1073, which authorized Secretary of Transportation to issue, and Secretary of the Treasury to purchase, notes or other obligations to meet obligations of Deepwater Port Liability Fund, applied to fiscal year ending Sept. 30, 1990, and was not repeated in subsequent appropriation acts.

Similar provisions were contained in the following prior appropriation acts:

Pub. L. 100-457, title I, Sept. 30, 1988, 102 Stat. 2128.

Pub. L. 100-202, § 101(f) [title I], Dec. 22, 1987, 101 Stat. 1329-358, 1329-361.

Pub. L. 99-500, § 101(f) [H.R. 5205, title I], Oct. 18, 1986, 100 Stat. 1783-308, and Pub. L. 99-591, § 101(f) [H.R. 5205, title I], Oct. 30, 1986, 100 Stat. 3341-308.

Pub. L. 99-190, § 101(e) [title I], Dec. 19, 1985, 99 Stat. 1267, 1270.

Pub. L. 98-473, title I, § 101(i) [title I], Oct. 12, 1984, 98 Stat. 1944, 1947.

Pub. L. 98-78, title I, Aug. 15, 1983, 97 Stat. 455.

Pub. L. 97-369, title I, Dec. 18, 1982, 96 Stat. 1767.

Pub. L. 97-102, title I, Dec. 23, 1981, 95 Stat. 1444.

Pub. L. 97-12, title I, June 5, 1981, 95 Stat. 67.

**§ 1518. Relationship to other laws**

**(a) Federal Constitution, laws, and treaties applicable; other Federal requirements applicable; status of deepwater port; Federal or State authorities and responsibilities within territorial seas unaffected; notification by Secretary of State of intent to exercise jurisdiction; objections by foreign governments**

(1) The Constitution, laws, and treaties of the United States shall apply to a deepwater port licensed under this chapter and to activities connected, associated, or potentially interfering with the use or operation of any such port, in the same manner as if such port were an area of exclusive Federal jurisdiction located within a State. Nothing in this chapter shall be construed to relieve, exempt, or immunize any person from any other requirement imposed by Federal law, regulation, or treaty. Deepwater ports licensed under this chapter do not possess the status of islands and have no territorial seas of their own.

(2) Except as otherwise provided by this chapter, nothing in this chapter shall in any way



alter the responsibilities and authorities of a State or the United States within the territorial seas of the United States.

(3) The Secretary of State shall notify the government of each foreign state having vessels registered under its authority or flying its flag which may call at or otherwise utilize a deepwater port but which do not currently have an agreement in effect as provided in subsection (c)(2)(A)(i) of this section that the United States intends to exercise jurisdiction over vessels calling at or otherwise utilizing a deepwater port and the persons on board such vessels. The Secretary of State shall notify the government of each such state that, absent its objection, its vessels will be subject to the jurisdiction of the United States whenever they—

(A) are calling at or otherwise utilizing a deepwater port; and

(B) are within the safety zone of such a deepwater port and are engaged in activities connected, associated, or potentially interfering with the use and operation of the deepwater port.

The Secretary of State shall promptly inform licensees of deepwater ports of all objections received from governments of foreign states in response to notifications made under this paragraph.

**(b) Law of nearest adjacent coastal State as applicable Federal law; Federal administration and enforcement of such law; nearest adjacent coastal State defined**

The law of the nearest adjacent coastal State, now in effect or hereafter adopted, amended, or repealed, is declared to be the law of the United States, and shall apply to any deepwater port licensed pursuant to this chapter, to the extent applicable and not inconsistent with any provision or regulation under this chapter or other Federal laws and regulations now in effect or hereafter adopted, amended, or repealed. All such applicable laws shall be administered and enforced by the appropriate officers and courts of the United States. For purposes of this subsection, the nearest adjacent coastal State shall be that State whose seaward boundaries, if extended beyond 3 miles, would encompass the site of the deepwater port.

**(c) Vessels of United States and foreign states subject to Federal jurisdiction; objections to jurisdiction; designation of agent for service of process; duty of licensee**

(1) The jurisdiction of the United States shall apply to vessels of the United States and persons on board such vessels. The jurisdiction of the United States shall also apply to vessels, and persons on board such vessels, registered in or flying the flags of foreign states; whenever such vessels are—

(A) calling at or otherwise utilizing a deepwater port; and

(B) are within the safety zone of such a deepwater port, and are engaged in activities connected, associated, or potentially interfering with the use and operation of the deepwater port.

The jurisdiction of the United States under this paragraph shall not, however, apply to vessels

registered in or flying the flag of any foreign state that has objected to the application of such jurisdiction.

(2) Except in a situation involving force majeure, a licensee shall not permit a vessel registered in or flying the flag of a foreign state to call at or otherwise utilize a deepwater port licensed under this chapter unless—

(A)(i) the foreign state involved, by specific agreement with the United States, has agreed to recognize the jurisdiction of the United States over the vessels registered in or flying the flag of that state and persons on board such vessels in accordance with the provisions of paragraph (1) of this subsection, while the vessel is located within the safety zone, or

(ii) the foreign state has not objected to the application of the jurisdiction of the United States to any vessel, or persons on board such vessel, while the vessel is located within the safety zone; and

(B) the vessel owner or operator has designated an agent in the United States for receipt of service of process in the event of any claim or legal proceeding resulting from activities of the vessel or its personnel while located within such a safety zone.

(3) For purposes of paragraph (2)(A)(ii) of this subsection, a licensee shall not be obliged to prohibit a call at or use of a deepwater port by a vessel registered in or flying the flag of an objecting state unless the licensee has been informed by the Secretary of State as required by subsection (a)(3) of this section.

**(d) Customs laws inapplicable to deepwater port; duties and taxes on foreign articles imported into customs territory of United States**

The customs laws administered by the Secretary of the Treasury shall not apply to any deepwater port licensed under this chapter, but all foreign articles to be used in the construction of any such deepwater port, including any component thereof, shall first be made subject to all applicable duties and taxes which would be imposed upon or by reason of their importation if they were imported for consumption in the United States. Duties and taxes shall be paid thereon in accordance with laws applicable to merchandise imported into the customs territory of the United States.

**(e) Federal district courts; original jurisdiction; venue**

The United States district courts shall have original jurisdiction of cases and controversies arising out of or in connection with the construction and operation of deepwater ports, and proceedings with respect to any such case or controversy may be instituted in the judicial district in which any defendant resides or may be found, or in the judicial district of the adjacent coastal State nearest the place where the cause of action arose.

(Pub. L. 93-627, §19(a)-(e), Jan. 3, 1975, 88 Stat. 2145, 2146; Pub. L. 98-419, §5(a), (b), Sept. 25, 1984, 98 Stat. 1609.)

**CODIFICATION**

Section 19(f) of Pub. L. 93-627 amended section 1333(a)(2) of Title 43, Public Lands.





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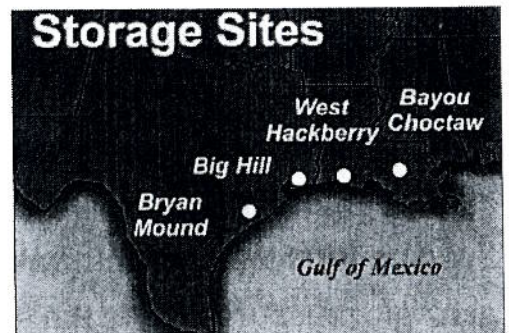
## SERVICES

# SPR Storage Sites

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## SPR Storage Sites

Emergency crude oil is stored in the Strategic Petroleum Reserve in salt caverns. Created deep within the massive salt deposits that underlie most of the Texas and Louisiana coastline, the caverns offer the best security and are the most affordable means of storage, costing up to 10 times less than aboveground tanks and 20 times less than hard rock mines.



Storage locations along the Gulf Coast were selected because they provide the most flexible means for connecting to the Nation's commercial oil transport network. Strategic Reserve oil can be distributed through interstate pipelines to nearly half of the Nation's oil refineries or loaded into ships or barges for transport to other refineries.

Strategic Petroleum Reserve caverns range in size from 6 to 35 million barrels in capacity; a typical cavern holds 10 million barrels and cylindrical in shape with a diameter of 200 feet and a height of 2,000 feet. One storage cavern is large enough for

Chicago's Willis Tower to fit inside with room to spare. The Reserve contains 62 of these huge underground caverns.

- **SPR Storage Sites in Louisiana: Bayou Choctaw and West Hackberry**
- **SPR Storage Sites in Texas: Big Hill and Bryan Mound**

### **How the SPR Storage Sites Were Created**

Salt caverns along the Gulf Coast have been used for storage for many years by the petrochemical industry. When the U.S. Government decided to create the Strategic Petroleum Reserve in the mid-1970s, it acquired previously created salt caverns to store the first 250 million barrels of crude oil. This was the most rapid way to begin securing an emergency supply of crude oil following the oil shocks of the 1970s. To stockpile oil beyond the first 250 million barrels, the Department of Energy created additional caverns.

Salt caverns are carved out of underground salt domes by a process called "solution mining." Essentially, the process involves drilling a well into a salt formation, then injecting massive amounts of fresh water. The water dissolves the salt. In creating the SPR caverns, the dissolved salt was removed as brine and either reinjected into disposal wells or more commonly, piped several miles offshore into the Gulf of Mexico. By carefully controlling the freshwater injection process, salt caverns of very precise dimensions can be created. For every barrel of crude oil to be stored in the SPR's salt caverns, it took 7 barrels of water to create the storage space.

Besides being the lowest cost way to store oil for long periods of time, the use of deep salt caverns is also one of the most environmentally secure. At depths ranging from 2000 to 4000 feet, the salt walls of the storage caverns are "self-healing." The extreme geologic pressures make the salt walls rock hard, and should any cracks develop in the walls, they would be almost instantly closed.

An added benefit of deep salt cavern storage is the natural temperature difference between the top of the caverns and the bottom, a distance of around 2,000 feet. The temperature differential keeps the crude oil continuously circulating in the caverns, maintaining the oil at a consistent quality.

The fact that oil floats on water is the underlying mechanism used to move oil in and out of the SPR caverns. To withdraw crude oil, fresh water is pumped into the bottom of

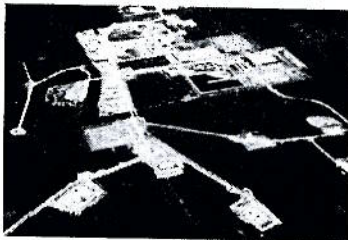


a cavern. The water displaces the crude oil to the surface. After the oil is removed from the SPR caverns, pipelines send it to various terminals and refineries around the nation.

## SPR Storage Sites

The Strategic Petroleum Reserve currently operates and maintains four major oil storage facilities in the Gulf Coast region of the United States, two sites in Texas (Bryan Mound and Big Hill), and two sites in Louisiana (West Hackberry and Bayou Choctaw). These four sites have a combined design storage capacity of 713.5 million barrels.

### Bayou Choctaw



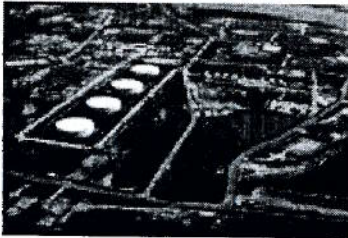
The **Bayou Choctaw** storage site is located in Iberville Parish, Louisiana, approximately 12 miles southwest of Baton Rouge, Louisiana. The site was acquired in April 1977 and became operational in 1987. Bayou Choctaw currently has six storage caverns, a design storage capacity of 76.0 million barrels and a cavern inventory of 71.8 million barrels.

### Big Hill



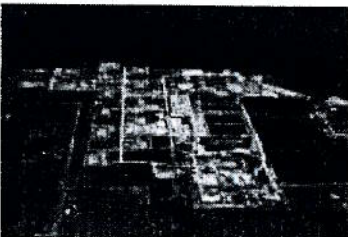
The **Big Hill** storage site is located in Jefferson County, Texas, approximately 26 miles southwest of Beaumont, Texas. The site was acquired in November 1982 and July 1983 and became operational in 1991. Big Hill currently has 14 storage caverns, a design storage capacity of 170.0 million barrels and a cavern inventory of 155.4 million barrels.

## Bryan Mound



The **Bryan Mound** storage site is located in Brazoria County, Texas, approximately three miles southwest of Freeport, Texas. The site was acquired in April 1977 and became operational in 1986. Bryan Mound currently has 20 storage caverns, a design storage capacity of 254.0 million barrels and a cavern inventory of 237.4 million barrels.

## West Hackberry



The **West Hackberry** storage site is located in Cameron Parish, Louisiana, approximately 25 miles southwest of Lake Charles, Louisiana. The site was acquired in April 1977 and became operational in 1988. West Hackberry currently has 22 storage caverns, a design storage capacity of 200.6 million barrels and a cavern inventory of 200.6 million barrels.

## MORE INFORMATION